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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,266	12/12/2003	Liangchi Hsu	NC25975 9021.173	2197

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EXAMINER	
JAIN, RAJ K	

ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/735,266	HSU ET AL.	
	Examiner	Art Unit	
	Raj Jain	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 16 is objected to because of the following informalities: Line 3 of claim 16 states "a final length" which is not described in the specifications and or drawings that clearly defines what constitutes a "final length". Appropriate correction and/or clarification is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (US 20020151290A1) in view of Kadaba et al (US 20020172217A1).

Regarding claims 1 and 13, Chen discloses a radio communication system in which code division multiplexed data is communicated between a network part (100) and a plurality of communication stations 106a-106d (see Fig 1) including a first station (106a) and at least a second station (106b), performing communication upon at least a first shared channel, the communication system comprising of:

- a CDM (code division multiplexing) assignment information generator for generating CDM assignment information, the CDM assignment information forming a first multiple assignment information set and at least a second multiple assignment information set for communicating with each of the first station and the at least the

second station, respectively, (see para 0050, 0010, Chen discloses the aspect of assignment information with respect to a 1xEX-DV system using a forward/reverse link data channel where the reverse link channel is a supplemental channel (R-SCH). The supplemental channel is formed by using an RF carrier and designated Walsh code(s) assignment, whereby a wireless unit transmits on the supplemental channel using a long code to distinguish from other wireless units. Each Walsh code assignment constitutes an assignment information set, the forward link can transmit voice, data and control information on the same RF carrier using different Walsh codes and therefore different assignment information sets).

Chen fails disclose the use of a single shared control channel for information transmission to "first and at least second stations".

Kadaba discloses use of a single shared control channel for information transmission to "first and at least second stations" (see abstract, 0007, 0008 and 0012).

The sharing of a control channel increases data throughput of the system and overall network efficiency by reducing the number of additional channels required for data transmission both on the uplink and downlink.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the sharing of control channel both on the uplink and downlink as taught by Kadaba within Chen so as to increase throughput of the overall system and reduce additional channel requirements.

Regarding claim(s) 2, 6, 15 and 18, Chen discloses a radio communication system in which code division multiplexed data is communicated between a network part (100)

and a plurality of communication stations 106a-106d (see Fig 1) including a first station (106a) and at least a second station (106b), performing communication upon at least a first shared channel.

Chen fails disclose the use of a shared control channel for information transmission to "first and at least second stations".

Kadaba discloses use of a shared control channel for information transmission to "first and at least second stations" (see abstract, 0007, 0008 and 0012).

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Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the sharing of control channel both on the uplink and downlink as taught by Kadaba within Chen so as to increase throughput of the overall system and reduce additional channel requirements.

Regarding claim 3 and 7, Chen discloses CDM assignment information and data frame generator using the 1xEV-DV standard (see 0005) with variable data frame lengths based on the number of bits of data contained within a given frame.

Regarding claims 4, 5, 8, 9, 16, 17, 19 and 20 Chen discloses fixed length and variable length frame formations (see 0005 and 0007).

Regarding claims 11 and 12 Chen discloses the use of 1xEV-DV data communications standard based on CDMA 2000 operating specifications system as part of the embodiment, (see 0034 and 0035).

Regarding claims 10 and 14, the concept of mobile registration is well known in wireless cellular arts, whereby a mobile initially communicates with a nearby cell site for purposes of data communications, billing and hand-off.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raj Jain whose telephone number is 571-272-3145. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

RJ
September 20, 2004